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POSITIONS, AREAS, AND COUNTS OF SUNSPOTS JANUARY-FEBRUARY, 1953

By Winifred Sawtell

These results are based upon measurements made at the Naval Observatory on plates secured either there or at the Mt. Wilson Observatory. The symbols used for the entries in the successive columns are as follows:

U.T., the epoch of observation in Universal Time.
No., the identifying number of the group assigned by Mt. Wilson.
Δl, the heliographic difference in longitude from the central meridian, measured positive to the west.
φ, the heliographic latitude, measured positive to the north.
ρ, the heliocentric angular distance from the line joining the centers of the Earth and Sun.
A, the true area of the umbra plus penumbra, expressed in millionths of the visible hemisphere.
s, the number of spots.

An asterisk means that no Mt. Wilson number was assigned. Plates secured at the Naval Observatory are indicated by N, and those at Mt. Wilson by M. The plate quality, which follows, is indicated by:

1, Poor; 2, Fair; 3, Good; 4, Very Good; 5, Excellent.

The following five quantities are listed successively at the end of each day, and give for that day:

1. The total number of groups, g.
2. The longitude of the central meridian, L_0.
3. The latitude of the center of the disc, B_0.
4. The total value of A.
5. The total value of s.

The mean daily area and the mean relative sunspot number, $r=10g+s$ are given at the end of the month.

These results are a continuation of those published in the *Monthly Weather Review* from February 1, 1927 to December 31, 1947.

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U.T.	No.	Δλ	φ	ρ	A	s
		°	°	°		
1.620	11075	−24	+12	28	16	1
N–2	11075	−23	+12	27	12	1
	11075	−17	+13	24	73	1
	(1)	(130)	(−3)		101	3
2.753	11075	− 3	+14	17	145	1
N–1						
	(1)	(115)	(−3)		145	1
3.727	11076	−85	+21	85	291	2
M–3	11075	+ 4	+13	16	6	2
	11075	+ 5	+14	17	12	1
	11075	+ 6	+13	17	12	2
	11075	+ 7	+13	17	12	3
	11075	+ 7	+14	18	12	4
	11075	+11	+14	20	85	5
	(2)	(103)	(−3)		430	19
4.709	11076	−70	+23	73	12	1
M–3	11076	−69	+21	71	24	3
	11076	−64	+21	67	218	8
	11075	+17	+12	23	12	3
	11075	+18	+13	24	6	4
	11075	+22	+13	27	6	1
	11075	+24	+14	29	61	4
	(2)	(90)	(−3)		339	24
5.600	11076	−54	+19	59	242	2
N–2	11075	+32	+14	36	97	3
	11075	+35	+15	39	48	1
	11075	+37	+15	42	121	1
	(2)	(78)	(−4)		508	7
6.598	11077	−73	+ 1	74	291	2
N–2	11076	−46	+19	52	145	1
	11076	−39	+19	45	158	1
	11075	+45	+15	48	109	2
	11075	+49	+16	53	73	2
	(3)	(65)	(−4)		776	8
8.945	11080	−88	− 5	88	145	2
M–3	11079	−77	− 6	77	32	3
	11078	−74	+ 9	76	32	2
	11078	−72	+11	74	12	2
	11077	−41	+ 3	42	182	1
	11076	−15	+19	27	73	3
	11076	−15	+22	29	12	3
	11076	−14	+20	27	73	4
	11076	−12	+21	27	12	4
	11076	− 8	+20	25	61	14
	11076	− 6	+19	24	121	4
	11075	+77	+13	77	12	1
	(6)	(34)	(−4)		767	43
9.728	11080	−77	− 7	77	145	6
M–4	11080	−76	− 6	76	24	2
	11080	−73	− 7	73	194	1
	11079	−65	− 7	65	24	3
	11077	−30	+ 2	31	170	1
	11076	− 6	+22	26	6	7
	11076	− 4	+20	24	85	9
	11076	− 3	+19	23	6	3
	11076	− 2	+19	23	6	3
	11076	− 2	+21	25	6	3
	11076	− 1	+21	25	6	1
	11076	+ 2	+20	24	24	8
	11076	+ 2	+19	23	12	6
	11076	+ 3	+18	23	6	10
	11076	+ 3	+20	24	16	4
	11076	+ 4	+19	24	97	3
	11076	+ 4	+18	23	6	2
	(4)	(24)	(−4)		833	72
10.705	11081	−80	−11	80	121	1
M–4	11080	−66	− 7	66	12	1
	11080	−65	− 9	65	16	2
	11080	−64	− 6	64	194	9
	11080	−62	− 6	62	6	1
	11080	−58	− 8	58	279	3
	11077	−17	+ 2	18	170	2
	11076	+ 6	+22	26	6	3
	11076	+ 7	+19	24	73	10
	11076	+ 8	+20	25	6	2
	11076	+11	+21	26	6	3
	11076	+12	+20	26	6	1
	11076	+13	+20	27	12	6
	11076	+13	+18	25	12	9
	11076	+15	+18	26	48	8
	11076	+16	+19	27	73	6
	(4)	(11)	(−4)		1040	67
11.790	11081	−69	− 9	69	6	1
M–4	11081	−66	−11	66	133	1
	11080	−50	− 8	50	24	7
	11080	−48	− 6	48	97	8
	11080	−46	− 6	46	6	3
	11080	−44	− 7	45	218	4
	11077	− 4	+ 3	7	16	1
	11077	− 3	+ 3	7	145	1
	11076	+20	+22	32	12	7
	11076	+22	+19	32	12	5
	11076	+23	+20	34	16	6
	11076	+24	+21	35	6	3
	11076	+26	+20	35	6	8
	11076	+26	+18	34	48	1
	11076	+29	+18	36	12	6
	11076	+31	+19	38	48	9
	(4)	(356)	(−4)		805	71
12.722	11081	−54	−10	54	145	1
M–3	11080	−37	− 8	38	16	2
	11080	−36	− 6	36	121	9
	11080	−31	− 7	31	194	1
	11077	+ 6	+ 2	8	6	1
	11077	+ 8	+ 3	11	145	1
	11076	+35	+21	43	24	6
	11076	+41	+20	47	16	3
	11076	+42	+18	47	6	2
	11076	+44	+20	50	24	1
	11076	+44	+18	49	24	3
	(4)	(344)	(−4)		721	30
13.589	11081	−42	−11	43	170	7
N–3	11080	−25	− 7	26	145	6
	11080	−22	− 8	22	36	4

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U.T.	No.	Δl	φ	ρ	A	s
		°	°	°		
	11080	−19	− 7	20	170	6
	11077	+21	+ 4	23	194	2
	11076	+53	+21	57	48	3
	11076	+56	+21	60	97	2
	(4)	(333)	(−4)		860	30
14.606	11081	−28	−11	29	109	1
N–3	11080	−12	− 8	13	36	3
	11080	−12	− 7	12	48	2
	11080	−11	− 8	12	61	3
	11080	− 7	− 7	7	145	9
	11080	− 5	− 7	6	170	2
	11077	+31	+ 4	32	12	1
	11077	+33	+ 4	34	133	1
	11076	+69	+22	74	24	1
	(4)	(319)	(−5)		738	23
15.624	11082	−24	−10	25	16	1
N–2	11082	−21	− 9	22	24	3
	11081	−15	−11	16	145	5
	11080	+ 6	− 8	7	24	1
	11080	+ 8	− 7	9	121	5
	11077	+47	+ 3	47	158	3
	(4)	(306)	(−5)		488	18
16.598	11082	−12	−10	13	16	1
N–3	11082	− 7	− 9	8	61	1
	11081	− 3	−11	6	145	4
	11080	+19	− 8	19	61	2
	11080	+21	− 7	21	121	3
	11077	+60	+ 3	61	170	2
	(4)	(293)	(−5)		574	13
17.749	11082	+ 3	− 8	5	24	5
M–3	11082	+ 4	− 7	6	12	2
	11082	+ 4	−11	7	12	5
	11082	+ 8	− 8	9	16	1
	11081	+12	− 9	13	6	2
	11081	+13	−11	15	121	5
	11080	+34	− 6	35	6	2
	11080	+35	−10	35	6	4
	11080	+36	− 8	36	73	3
	11077	+75	+ 2	75	242	1
	(4)	(278)	(−5)		518	30
18.736	11082	+16	− 9	17	12	1
M–3	11082	+22	− 9	23	16	5
	11081	+25	−11	26	109	3
	11080	+49	− 9	50	48	2
	11077	+88	+ 3	88	48	1
	(4)	(265)	(−5)		233	12
19.734	11082	+36	− 9	36	6	1
N–3	11082	+36	− 7	36	12	2
	11081	+39	−10	40	109	1
	11080	+62	− 7	62	97	2
	(3)	(252)	(−5)		224	6
20.665	11081	+51	− 9	52	97	1
N–3	11080	+76	− 6	76	145	1
	(2)	(240)	(−5)		242	2

FEBRUARY

U.T.	No.	Δl	φ	ρ	A	s
		°	°	°		
21.913	11083	−48	+12	52	16	2
M–3	11083	−46	+11	49	24	3
	11081	+67	−10	67	73	2
	(2)	(225)	(−5)		113	7
22.695	11083	−37	+13	42	12	1
N–2	11083	−34	+12	37	36	1
	11081	+78	− 8	78	97	1
	(2)	(213)	(−5)		145	3
23.729	11083	−19	+12	26	24	1
N–3						
	(1)	(199)	(−5)		24	1
24.701	11083	− 6	+12	17	32	1
N–3						
	(1)	(186)	(−5)		32	1
25.719					0	0
M–4						
	(0)	(173)	(−6)		0	0
26.637					0	0
N–3						
	(0)	(161)	(−6)		0	0
27.721					0	0
M–3						
	(0)	(147)	(−6)		0	0
28.822	(*)	−26	+ 7	30	6	1
N–3						
	(1)	(132)	(−6)		6	1
29.596	11084	−12	+ 9	19	12	1
N–2	(*)	+23	+ 5	26	6	2
	(2)	(122)	(−6)		18	3
30.608	(*)	− 8	+15	23	12	1
N–2						
	(1)	(109)	(−6)		12	1
31.875					0	0
N–3						
	(0)	(92)	(−6)		0	0

Mean for 30 days, $A = 356$, $r = 40.5$

1.759					0	0
N–2						
	(0)	(80)	(−6)		0	0
2.604	11085	−76	+ 4	77	48	1
N–2						
	(1)	(69)	(−6)		48	1

FEBRUARY

U.T.	No.	Δl	φ	ρ	A	s
		°	°	°		
3.840	11085	−61	+ 5	63	73	2
N–3						
	(1)	(53)	(−6)		73	2
4.724	11085	−47	+ 4	49	48	2
N–3	(*)	+70	+10	74	6	1
	(2)	(41)	(−6)		54	3
5.622	11085	−36	+ 3	38	48	2
N–3						
	(1)	(29)	(−6)		48	2
6.618	11085	−23	+ 3	26	48	1
N–3						
	(1)	(16)	(−6)		48	1
7.862	11086	−45	− 6	45	24	1
N–3	11085	− 6	+ 4	13	32	1
	(2)	(0)	(−6)		56	2
8.710	11085	+ 5	+ 3	12	24	1
N–3						
	(1)	(349)	(−7)		24	1
9.597	11088	−17	− 8	17	12	1
N–3	11087	− 3	+ 3	10	24	1
	11085	+16	+ 4	20	24	1
	(3)	(337)	(−7)		60	3
10.577	11085	+30	+ 4	33	24	1
N–3						
	(1)	(324)	(−7)		24	1
11.740	11087	+25	+ 5	27	12	2
M–3	11085	+45	+ 3	46	16	4
	(2)	(309)	(−7)		28	6
12.854					0	0
N–2						
	(0)	(294)	(−7)		0	0
13.722					0	0
N–3						
	(0)	(283)	(−7)		0	0
14.644					0	0
N–2						
	(0)	(271)	(−7)		0	0
15.816					0	0
M–3						
	(0)	(255)	(−7)		0	0
16.587					0	0
N–3						
	(0)	(245)	(−7)		0	0
17.650					0	0
N–2						
	(0)	(231)	(−7)		0	0
18.640					0	0
N–2						
	(0)	(218)	(−7)		0	0
19.624					0	0
N–1						
	(0)	(205)	(−7)		0	0
20.776					0	0
N–3						
	(0)	(190)	(−7)		0	0
21.766					0	0
N–3						
	(0)	(177)	(−7)		0	0
22.709					0	0
N–1						
	(0)	(164)	(−7)		0	0
23.715					0	0
N–3						
	(0)	(151)	(−7)		0	0
24.772					0	0
M–3						
	(0)	(137)	(−7)		0	0
25.566					0	0
N–3						
	(0)	(127)	(−7)		0	0
26.630					0	0
N–2						
	(0)	(113)	(−7)		0	0
27.570					0	0
N–3						
	(0)	(100)	(−7)		0	0
28.669					0	0
N–3						
	(0)	(86)	(−7)		0	0

Mean for 28 days
$A = 16$
$r = 6.2$

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